

India's International Trade of Four Specific Commodities in the Recent Past

Some Insights

Preface

The study uses trade indicators to analyse merchandise export and import data in a way that should be useful for the purpose of policy. The indicators provide a glimpse of the trade patterns of the world and the performance of India in comparison to various other countries. They have been used in the case of India's exports of **Coke & Semi Coke and Babies' Garments and Clothing Accessories** and imports of **Sulphur & Essential Oils** to indicate the possible directions policy may take.

The data used in this study has been sourced from the Export Import Data Bank of the DGCI&S, Department of Commerce, and Government of India and from the United Nations Comtrade Database. Introduction notes of each commodities has been sourced from the various sights –viz Wikipedia, Britannica, The Economic Times etc.

Computations are based on data at ITC-HS four-digit level (ITC-HS Code-2704 & 6111 for export and 2503 & 3301 for import) and the latest finalized data available on the UN Comtrade Database up to year 2022 and on the DGCI&S Database up to July'2023. So, trends from 2019 to 2022 have been shown when we extract the data from UN Comtrade and from 2019 to 2022 have been shown when we extract the data from DGCIS Data base.

In this report, we will see various analysis and aspects of India's Precious as well as International export trade of Coke & Semi Coke and Babies' Garments and Clothing Accessories and imports of Sulphur & Essential Oils. We will use both the 4 digit Commodity codes, for our analysis, as appropriate.

Trends in India's as well as International Trade i.e. Exports and Imports of above four Commodities are given below in different tables :

- Table1: India's top 10 Export destination of Coke & Semi Coke with their shares in percentage.
- Table 2 : World's top 10 Exporters of Coke & Semi Coke with their shares in percentage.
- Table 3 : World's top 10 Importers of Coke & Semi Coke with their shares in percentage.
- Annex- I : Top 3 sources of Coke & Semi Coke of World's top 3 Importers.
- Table 4: India's top 10 Export destination of Babies' Garments with their shares in percentage.
- Table 5 : World's top 10 Exporters of Babies' Garments with their shares in percentage.
- Table 6 : World's top 10 Importers of Babies' Garments with their shares in percentage.
- Annex-II : Top 3 sources of Babies' Garments of World's top 3 Importers.
- Table 7 : India's top10 Sources of Sulphur with their shares in percentage.
- Table 8 :World's top 10 Importers of Sulphur with their shares in percentage.
- Table 9 : India's top 10 Sources of Essential Oils with their shares in percentage.
- Table 10 : World's top 10 Importers of Essential Oils with their shares in percentage.

EXPORT

Coke and Semi Coke of Coal

Coke is a grey, hard, and porous coal-based fuel with a high carbon content and few impurities, made by heating coal or oil in the absence of air—a destructive distillation process. It is an important industrial product, used mainly in iron ore smelting, but also as a fuel in stoves and forges when air pollution is a concern.

The unqualified term "coke" usually refers to the product derived from low-ash and low-sulphur bituminous coal by a process called coking. A similar product called petroleum coke, or pet coke, is obtained from crude oil in oil refineries. Coke may also be formed naturally by geologic processes.

Many historical sources dating to the 4th century describe the production of coke in ancient China. The Chinese first used coke for heating and cooking no later than the 9th century. By the first decades of the 11th century, Chinese ironworkers in the Yellow River valley began to fuel their furnaces with coke, solving their fuel problem in that tree-sparse region.

China is the largest producer and exporter of coke today. China produces 60% of the world's coke. Concerns about air pollution have motivated technological changes in the coke industry by elimination of outdated coking technologies that are not energy-efficient

Bituminous Coal must meet a set of criteria for use as coking coal, determined by particular coal assay techniques. These include moisture content, ash content, sulphur content, volatile content, tar, and plasticity. This blending is targeted at producing a coke of appropriate strength, while losing an appropriate amount of mass. Other blending considerations include ensuring the coke does not swell too much during production and destroy the coke oven through excessive wall pressures.

The greater the volatile matter in coal, the more by-product can be produced. It is generally considered that levels of 26–29% of volatile matter in the coal blend are good for coking purposes. Thus different types of coal are proportionally blended to reach acceptable levels of volatility before the coking process begins. If the range of coal types is too great, the resulting coke is of widely varying strength and ash content, and is usually unsaleable, although in some cases it may be sold as an ordinary heating fuel. As the coke has lost its volatile matter, it cannot be coked again.

Coking coal is different from thermal coal, but arises from the same basic coal-forming process. Coking coal has different macerals from thermal coal, i.e. different forms of the compressed and fossilized vegetative matter that comprise the coal. The different macerals arise from different mixtures of the plant species, and variations of the conditions under which the coal has formed.

The industrial production of coke from coal is called coking. The coal is baked in an airless kiln, a "coke furnace" or "coking oven", at temperatures as high as 2,000 °C (3,600 °F) but usually around 1,000–1,100 °C (1,800–2,000 °F). This process vaporises or decomposes organic substances in the coal, driving off volatile and liquid products, including water, such as coal gas and coal tar. Coke is the non-volatile residue of the decomposition, the cemented-together carbon and mineral residue of the original coal particles in the form of a hard and somewhat glassy solid.

Coke can be used as a fuel and as a reducing agent in smelting iron ore in a blast furnace. The carbon monoxide produced by combustion of coke reduces iron oxide (hematite) to produce iron: Coke is commonly used as fuel for blacksmithing.

Coke was used in Australia in the 1960s and early 1970s for house heating and was incentivized for home use in the UK (so as to displace coal) after the 1956 Clean Air Act, which was passed in response to the Great Smog of London in 1952.

Since smoke-producing constituents are driven off during the coking of coal, coke forms a desirable fuel for stoves and furnaces in which conditions are not suitable for the complete burning of bituminous coal itself. Coke may be combusted producing little or no smoke, while bituminous coal would produce much smoke. Coke was widely used as a smokeless fuel substitute for coal in domestic heating following the creation of "smokeless zones" in the United Kingdom.

These are broadly classified under **H.S. Code-2704**.

Table – 1

India's Top 10 destination of Coke and Semi Coke (H.S Code-2704)

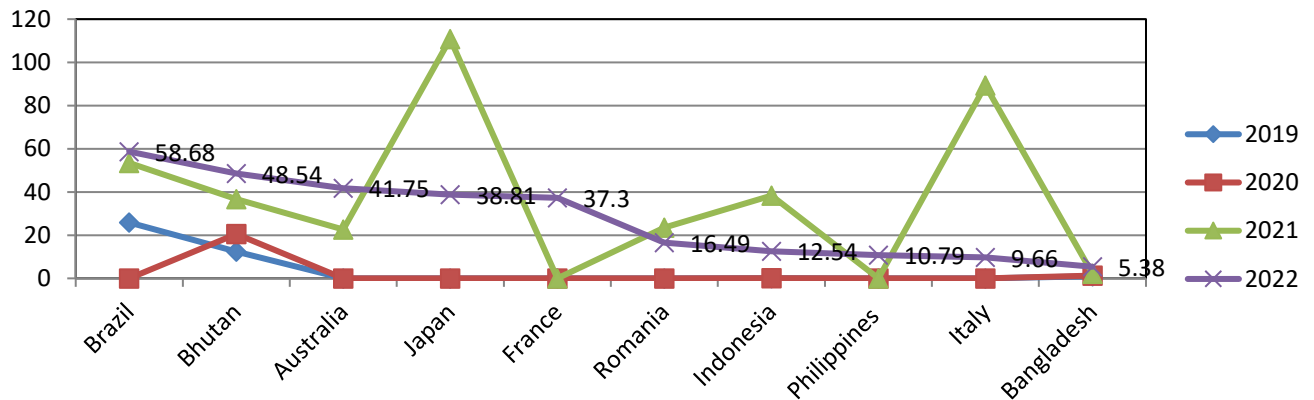
Rank	Countries	2019		2020		2021		2022	
		Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	Brazil	25.84	60.44	0.00	0	53.41	10.39	58.68	20.46
2.	Bhutan	12.43	29.08	20.51	84.57	36.67	7.13	48.54	16.93
3.	Australia	0.00	0.00	0.00	0	22.59	4.40	41.75	14.56
4.	Japan	0.00	0.00	0.00	0.002	110.85	21.57	38.81	13.53
5.	France	0.00	0.00	0.00	0	0.00	0.00	37.30	13.01
6.	Romania	0.00	0.00	0.00	0	23.45	4.56	16.49	5.75
7.	Indonesia	0.03	0.08	0.01	0.05	38.31	7.45	12.54	4.37
8.	Philippines	0.00	0.00	0.00	0	0.00	0.00	10.79	3.76
9.	Italy	0.00	0.00	0.00	0	89.24	17.37	9.66	3.37
10.	Bangladesh	0.93	2.17	1.27	5.23	2.10	0.41	5.38	1.88
	Others	3.52	8.22	2.46	10.15	137.28	26.71	6.82	2.38
	Total	42.74	100	24.25	100	513.90	100	286.76	100

Source: DGCI&S.

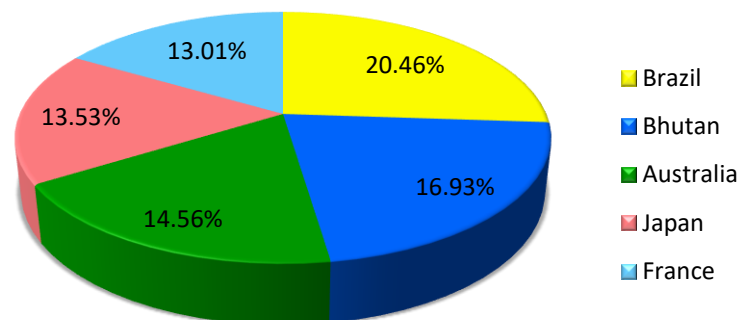
Note : India's Export including re-export

Leading importers of Coke & Semi Coke from India from 2019-2022 (Values in million \$)

Data label given on the basis of 2022



India's top 5 destinations of Coke & Semi Coke by percentage India in 2022:



In the year 2022, India has exported Coke & Semi Coke worth of US \$ 286.76 Million, showing the decrease of almost 44.20% compared to the year 2021. Brazil is the largest market for Coke & Semi Coke export from India, in 2022 Brazil imported US \$ 58.68 Million worth of Coke & Semi Coke from India which was 20.46% share of India's total export. It was followed by Bhutan and Australia with 16.93% and 14.56% share. The top 10 countries in total shared the share of 97.62% of the Coke & Semi Coke export value from India.

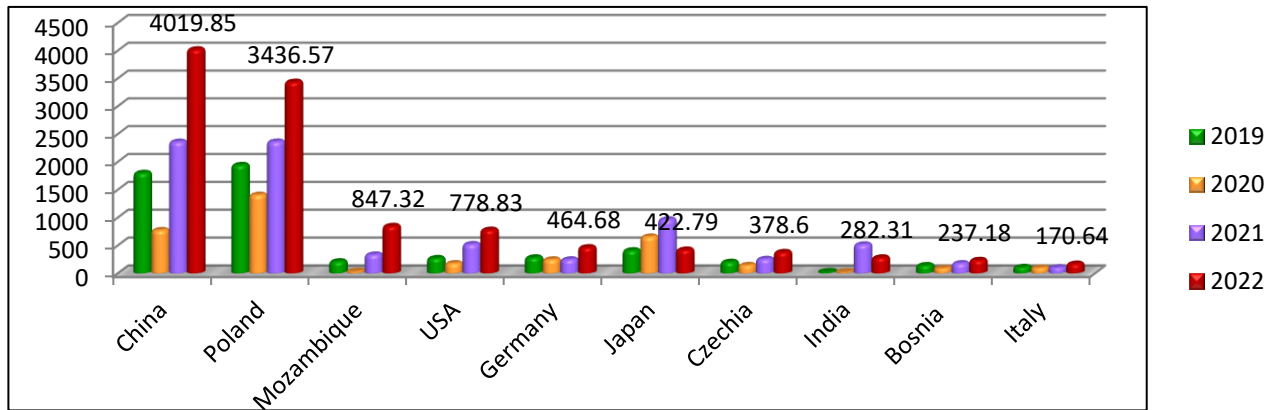
World's Top 10 exporter of Coke and Semi Coke (H.S Code-2704)

Rank	Countries	2019		2020		2021		2022	
		Value (million \$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	China	1798.56	24.40	772.78	14.70	2358.25	21.70	4019.85	34.47
2.	Poland	1940.72	26.33	1406.80	26.76	2360.50	21.72	3436.57	29.47
3.	Mozambique	212.08	2.88	34.57	0.66	334.37	3.08	847.32	7.27
4.	USA	270.81	3.67	179.04	3.41	521.13	4.80	778.83	6.68
5.	Germany	282.41	3.83	247.43	4.71	247.29	2.28	464.68	3.98
6.	Japan	410.17	5.56	656.64	12.49	965.10	8.88	422.79	3.63
7.	Czechia	202.99	2.75	146.37	2.78	255.61	2.35	378.60	3.25
8.	India	28.10	0.38	24.11	0.46	515.69	4.75	282.31	2.42
9.	Bosnia	143.56	1.95	92.37	1.76	179.15	1.65	237.18	2.03
10.	Italy	110.70	1.50	98.44	1.87	105.31	0.97	170.64	1.46
	Others	1971.68	26.75	1599.14	30.42	3024.18	27.83	623.13	5.34
	Total	7371.77	100	5257.69	100	10866.59	100	11661.89	100

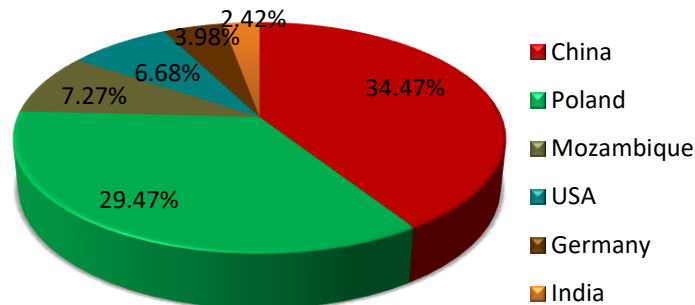
Source: UN Comtrade

Leading Coke & Semi Coke of world from 2019 to 2022(Values in million USD)

Data label given on the basis of 2022



Country wise world's leading exporter of Coke & Semi Coke by percentage in 2022 :



In value terms, Global export of Coke & Semi Coke of Coal amounted to US \$ 11.66 Billion in 2022, increased by US \$ 795.30 Million over the last year. China was the main global supplier of Coke & Semi Coke of Coal with a worth value of US \$4.02 Billion which was accounted by 34.47% share of global exports in that year. It was followed by Poland (29.47%), Mozambique (7.27%). India was far behind from China in the global export of Coke & Semi Coke of Coal and stood at 8th position in ranking in the world with 2.42% share of world export Coke & Semi Coke of Coal in 2022.

Table-3

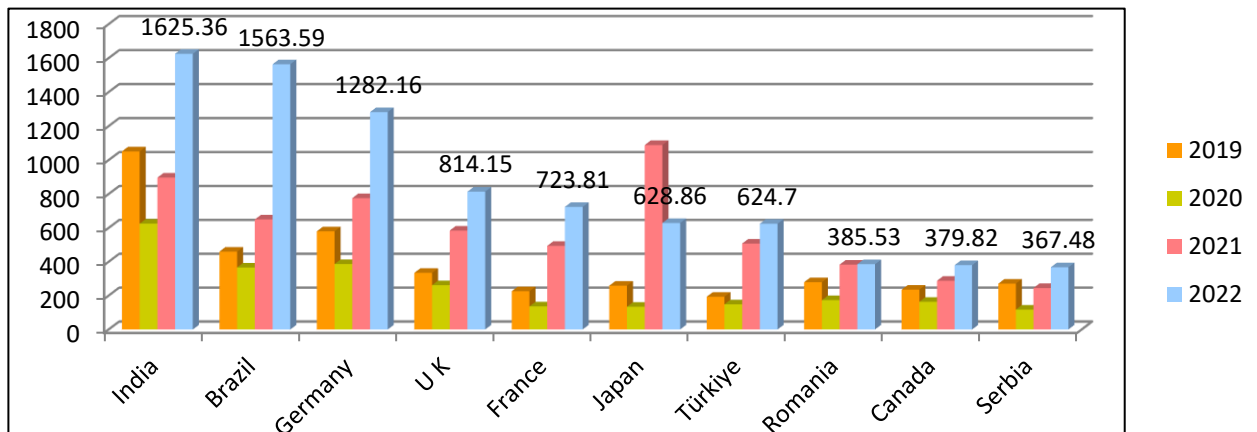
World's top 10 Importers of Coke and Semi Coke (H.S Code-2704)

Rank	Countries	2019		2020		2021		2022	
		Value (million \$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	India	1051.00	13.04	625.04	10.66	896.86	8.32	1625.36	13.35
2.	Brazil	459.45	5.70	366.16	6.24	649.78	6.03	1563.59	12.85
3.	Germany	579.95	7.20	386.36	6.59	775.68	7.19	1282.16	10.53
4.	U K	334.32	4.15	261.62	4.46	584.10	5.42	814.15	6.69
5.	France	226.28	2.81	136.42	2.33	493.55	4.58	723.81	5.95
6.	Japan	258.55	3.21	134.38	2.29	1088.56	10.09	628.86	5.17
7.	Türkiye	193.58	2.40	148.80	2.54	507.25	4.70	624.70	5.13
8.	Romania	279.45	3.47	173.20	2.95	382.91	3.55	385.53	3.17
9.	Canada	235.11	2.92	163.77	2.79	287.82	2.67	379.82	3.12
10.	Serbia	270.57	3.36	117.57	2.01	244.78	2.27	367.48	3.02
	Others	4171.58	51.76	3350.04	57.14	4872.07	45.18	3775.60	31.02
	Total	8059.84	100	5863.35	100	10783.37	100	12171.06	100

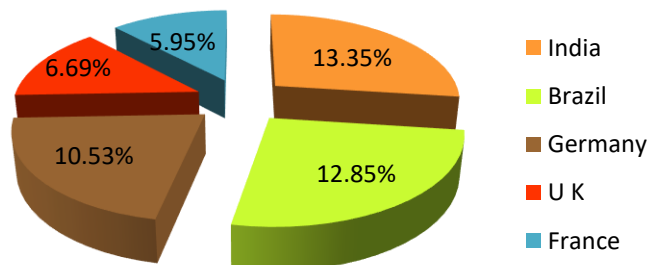
Source : UN Comtrade

Leading Coke & Semi Coke importers of world from 2019 to 2022(Values in million USD)

Data label given on the basis of 2022



Country wise world's leading importers of Coke & Semi Coke by percentage in 2022

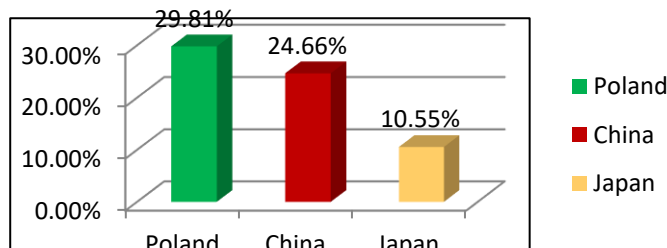


The volume of global imports of Coke & Semi Coke of Coal totaled US \$ 12.17 Billion in 2022. The **India** Remains the Largest Global Importer of Coke & Semi Coke of Coal, with a worth value of US \$ 1.62 Billion, comprising 13.35% of global imports in 2022. It was followed by Brazil (12.85%), Germany (10.53%) of global import.

Annexure-1

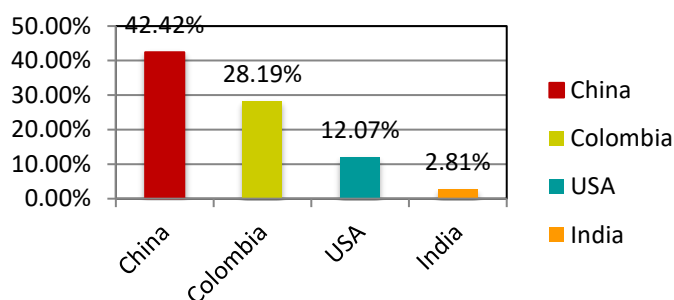
Top 10 sources of world's top 3 importers of Coke and Semi Coke (H.S Code 2704)

i) Top 3 Sources of Coke & Semi Coke to India in 2022 by percentage:



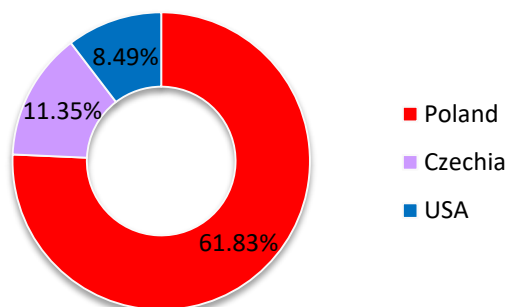
India imports most of its requirements of Coke & Semi Coke from Poland with 29.81 % share of India's total import of Coke & Semi Coke came from Poland in 2022. China (24.66%) & Japan (10.55%) were the 2nd and 3rd major source of Coke & Semi Coke of Coal to India in the same year. (Source: UN Comtrade)

ii) Top 3 Sources of Coke & Semi Coke to Brazil in 2022 by percentage:



42.42% of Coke & Semi Coke imports of Brazil came from China in 2022, followed by Colombia (28.19%) and USA (12.07%). Brazil imports of Coke & Semi Coke 2.81% of its total import of Coke & Semi Coke from India in that year. (Source: UN Comtrade)

iii) Top 3 Sources of Coke & Semi Coke to Germany in 2022 by percentage:



Poland was the largest source of Coke & Semi Coke to Germany in 2022, 61.83% of total Coke & Semi Coke import by Germany from Poland in 2022. Czechia (11.35%) and USA (8.49%) were other important sources of Coke & Semi Coke to Germany in that year. In the same year there is trade of Coke & Semi Coke exported from India to Germany (Source : UN Comtrade)

Babies' Garments and Clothing Accessories

Babies' Garments is clothing made for infants. Baby fashion is a social-cultural consumerist practice that encodes in children's fashion the representation of many social features and depicts a system characterized by differences in social class, richness, gender, or ethnicity.

Babies' Garments clothing size is typically based on age. These are usually preemie for a preterm birth baby, 0 to 3 months, 3 to 6 months, 6 to 9 months, 9 to 12 months, 12 months, 18 months, and 24 months, though there is no industry standard definition for those sizes. Most retailers provide sizing charts based on a child's weight, height, or both, and the child's weight and height percentile may also be used for properly sizing clothing for the infant.

Clothing and bedding "interfere with normal exercise and growth and keep the baby from taking comfortable postures or changing posture during sleep". An infant may stretch, necessitating clothing that is sufficiently loose to allow movement.

Comfort, mobility and ease of access are major aspects of modern baby clothes. In Western countries babies typically wear bodysuits and baby grows. If it is warm enough, these might be sufficient for both daytime and nightwear, supplemented by bibs for feeding time. For cooler weather and more formal occasions, they might become underwear beneath outfits more comparable to those worn by adults. While these outer clothes often feature child-friendly images such as cartoons, for especially formal occasions such as weddings infants might wear scaled down adult styles such as mini-tuxedos. During warmer summer months rompers and 2-in-1 dresses (a dress top half with a romper under section) are very popular choices. These styles of clothing allow young babies to move around with ease and comfort. In cold weather, outerwear such as snowsuits can keep babies warm.

For young babies garments will often have full leg and back openings to allow for easy nappy changing. Other helpful features also include fold over scratch mitts to the sleeves, to help prevent very young babies from accidentally scratching themselves.

Snaps (also known as poppers) or zip fastenings have become more popular because they are easier to use than traditional buttons. Due to babies' soft skin, one of the more important attributes to look for in infant and baby clothing is that the clothes are soft and not rough. Soft baby clothes made from organic cotton or eco-friendly materials are becoming more popular. There are even infant clothes now made with bamboo rayon fibres which are marketed as being breathable and soft to the touch.

Babies' Garments comes in a variety of materials, such as bamboo or cotton. Bamboo is a popular style and is well liked because of its very soft feel, however it tends to pill easily with wear. In addition to regular cotton, infant cotton clothing comes in different varieties. Brushed cotton feels luxuriously smooth and cool thanks to a unique finishing technique called brushing. Pima cotton is a high-end type of cotton with longer fibers than conventional cotton. It has a reputation for producing a smooth fabric that's soft to the touch, wrinkle-resistant, and ultra-durable.

Infants may have allergic reactions to certain materials, especially synthetic fibres such as polyester, rayon, and nylon, and natural fibres such as wool.

Excessive thermal insulation has been associated with an increased incidence of sudden infant death syndrome (SIDS). The primary causes are an excess of bedding or clothing, soft sleep surfaces, and stuffed animals. The odds ratio of SIDS associated with thermal insulation at least two togs above the lower critical value (after adjusting for the season and confounding factors) was 1.35 in a New Zealand study, which also found that SIDS had some correlation with too little thermal insulation. A 1984 study of 34 infant cot deaths found that for 2/3 excessive clothing and over-wrapping was a contributing cause.

These are broadly classified under **H.S. Code-6111**.

Table – 4

India's Top 10 destination of Babies' Garments and Clothing Accessories(H.S Code-6111)

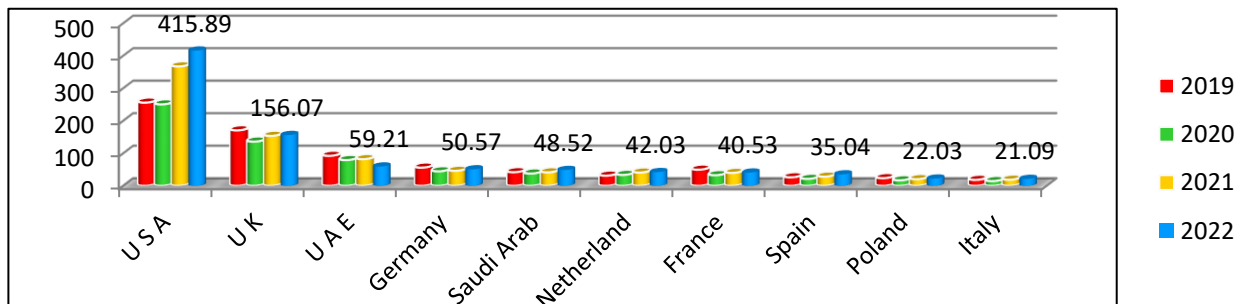
Rank	Countries	2019		2020		2021		2022	
		Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	U S A	255.88	27.59	250.46	31.20	367.26	36.37	415.89	38.48
2.	U K	170.57	18.39	136.01	16.94	153.58	15.21	156.07	14.44
3.	U A E	92.23	9.94	79.19	9.87	82.02	8.12	59.21	5.48
4.	Germany	55.92	6.03	44.56	5.55	46.10	4.56	50.57	4.68
5.	Saudi Arab	41.81	4.51	37.77	4.70	41.37	4.10	48.52	4.49
6.	Netherland	31.26	3.37	33.56	4.18	40.75	4.03	42.03	3.89
7.	France	49.62	5.35	32.67	4.07	39.73	3.93	40.53	3.75
8.	Spain	26.11	2.81	21.39	2.66	28.17	2.79	35.04	3.24
9.	Poland	23.62	2.55	16.84	2.10	20.43	2.02	22.03	2.04
10.	Italy	18.30	1.97	14.55	1.81	18.75	1.86	21.09	1.95
	Others	162.30	17.50	135.75	16.91	171.76	17.01	189.69	17.55
	Total	927.61	100	802.76	100	1009.91	100	1080.66	100

Source: DGCI&S

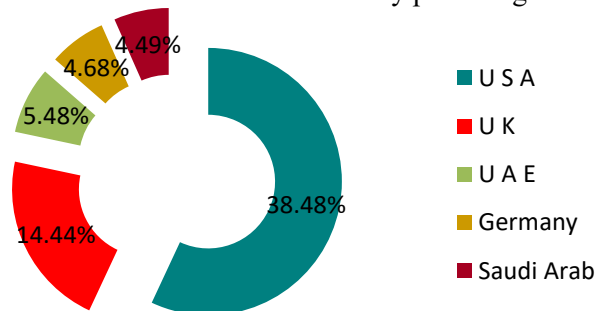
Note : India's Export including re-export

India's major destination Babies' Garments from 2019-2022(Values in million USD)

Data label given on the basis of 2022



India's top 5 destinations of Babies' Garments by percentage in 2022:



In 2022, India's export of Babies' Garments and Clothing Accessories amounted to US \$ 1.08 Billion, going up by more than 7% against the previous year figure. Over the period under review, Babies' Garments export from India reached its maximum volume in 2022. USA represented the major importer of Babies' Garments and Clothing Accessories from India in 2022, recording US \$ 415.89 Million which was 38.48% of total export of India, followed by UK and UAE with 14.44% and 5.48% share of India's total export value of Babies' Garments and Clothing Accessories 2022.

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Table - 5

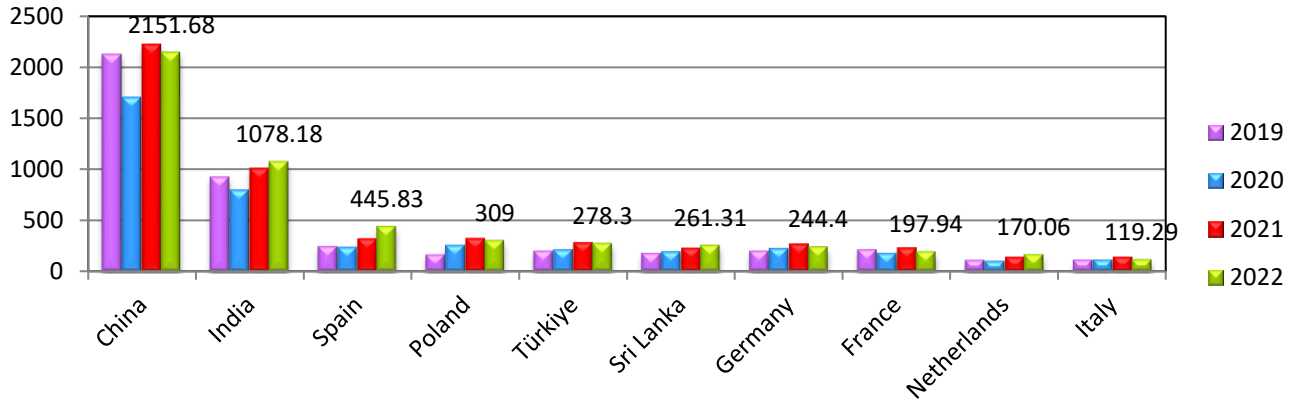
World's Top exporter of Babies' Garments and Clothing Accessories (H.S Code-6111)

Rank	Countries	2019		2020		2021		2022	
		Value (million \$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	China	2130.57	32.56	1704.83	28.94	2223.40	29.45	2151.68	34.46
2.	India	927.86	14.18	800.97	13.60	1011.07	13.39	1078.18	17.27
3.	Spain	247.62	3.78	242.04	4.11	324.44	4.30	445.83	7.14
4.	Poland	166.12	2.54	260.27	4.42	327.04	4.33	309.00	4.95
5.	Türkiye	204.37	3.12	215.82	3.66	284.15	3.76	278.30	4.46
6.	Sri Lanka	183.47	2.80	197.20	3.35	231.96	3.07	261.31	4.18
7.	Germany	203.27	3.11	228.29	3.88	274.19	3.63	244.40	3.91
8.	France	217.48	3.32	182.47	3.10	234.97	3.11	197.94	3.17
9.	Netherlands	113.48	1.73	102.27	1.74	144.99	1.92	170.06	2.72
10.	Italy	117.09	1.79	117.23	1.99	145.52	1.93	119.29	1.91
	Others	2032.86	31.06	1838.74	31.22	2349.24	31.11	988.12	15.82
	Total	6544.20	100	5890.13	100	7550.96	100	6244.12	100

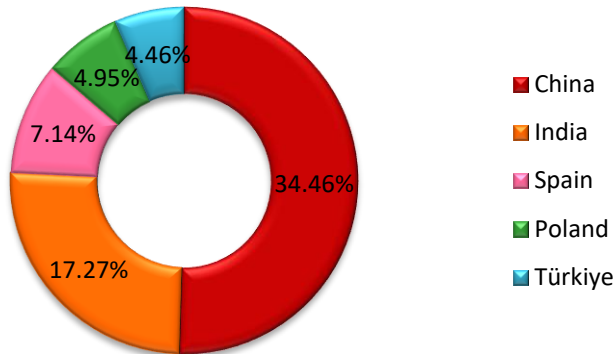
Source: UN Comtrade

Top world exporters of Babies' Garments from 2019 to 2022 (Values in million USD)

Data label given on the basis of 2022



Export trends in world's leading Babies' Garments exporters by percentage in 2022:



Global export of Babies' Garments and Clothing Accessories was totaled US \$ 6.24 Billion in 2022. In that year the total export value decreased at an rate of -17.31% from 2021. China represented the major exporter of Babies' Garments and Clothing Accessories in the world, exported 34.46% share of world export. India constitutes the 2nd largest exporter of the Commodity in the same year with value worth US \$ 1.08 Billion or 17.27 % share of world export, which was followed by Spain with 7.14% share.

Table - 6

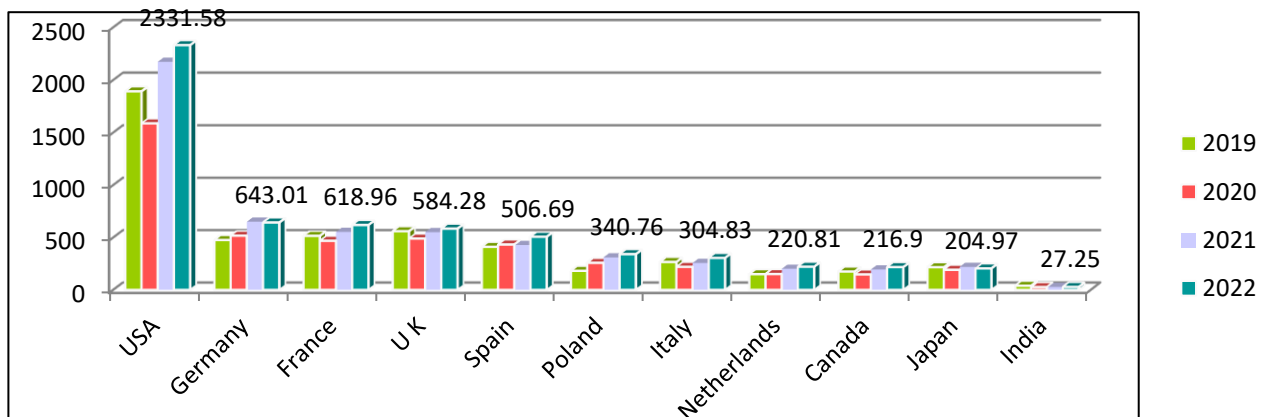
World's top Importers of Babies' Garments and Clothing Accessories (H.S Code-6111)

Rank	Countries	2019		2020		2021		2022	
		Value (million \$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	USA	1892.07	25.96	1587.97	24.16	2172.21	26.43	2331.58	29.09
2.	Germany	475.50	6.53	517.08	7.87	650.95	7.92	643.01	8.02
3.	France	515.50	7.07	468.32	7.12	552.54	6.72	618.96	7.72
4.	U K	559.93	7.68	489.95	7.45	550.97	6.70	584.28	7.29
5.	Spain	410.32	5.63	432.72	6.58	427.33	5.20	506.69	6.32
6.	Poland	181.64	2.49	257.88	3.92	309.53	3.77	340.76	4.25
7.	Italy	266.23	3.65	219.20	3.33	256.27	3.12	304.83	3.80
8.	Netherlands	149.08	2.05	150.75	2.29	200.85	2.44	220.81	2.76
9.	Canada	174.57	2.40	147.46	2.24	194.74	2.37	216.90	2.71
10.	Japan	215.71	2.96	191.50	2.91	218.87	2.66	204.97	2.56
34.	India	39.48	0.54	26.24	0.40	27.51	0.33	27.25	0.34
	Others	2407.14	33.03	2084.60	31.71	2658.22	32.34	2014.77	25.14
	Total	7287.18	100	6573.67	100	8219.99	100	8014.81	100

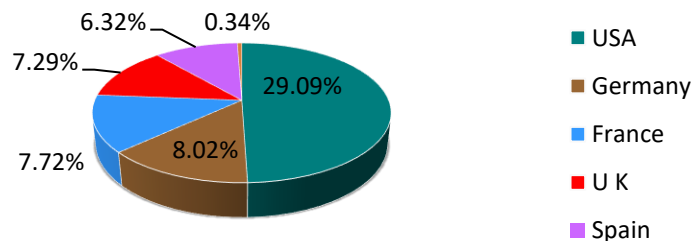
Source :UNComtrade

Top world importers of Babies' Garments from 2019 to 2022 (Values in million USD)

Data label given on the basis of 2022



Country wise leading global Importer of Babies' Garments by percentage in 2022

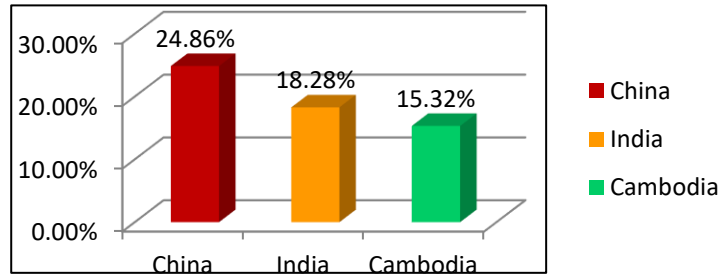


The USA imported around US \$ 2.33 Billion worth of Babies' Garments and Clothing Accessories in 2022, or 29.09% share of world's total, making it the leading importer of Babies' Garments worldwide that year. Germany followed in second place, importing around US \$ 643.01 million worth of the commodity or 8.02% share. It was followed by France imported US \$ 618.96 million of Babies' Garments 7.72% share of world total import in the same year. **India's** share was only 0.34% share of world import. In the year 2022 the world import of Babies Garments was US \$ 8.01 Billion which has decreased by almost 2.50 % from the year 2021.

Annexure-II

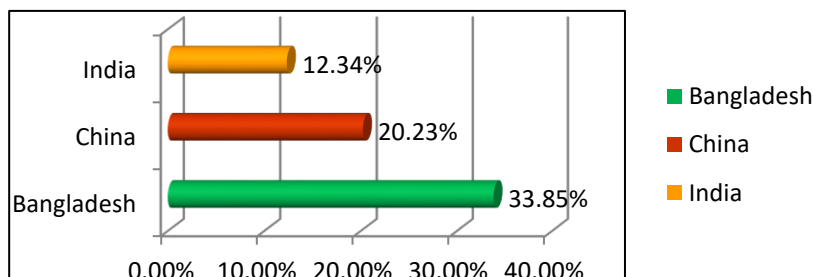
Sources of world's top three importers of Babies' Garments (H.S Code-6111)

i) Top 3 Sources of Babies Garments' to USA in 2022 by percentage:



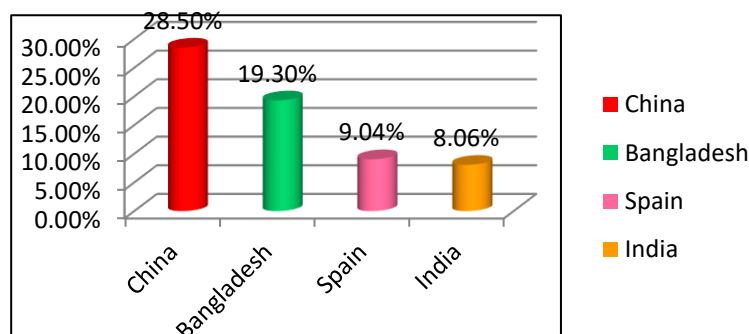
In the year 2022 USA, imports largest worth value of Babies' Garments and Clothing Accessories 24.86% share from China, **India** the 2nd largest source country of has exported 18.28% of USA's total import in 2022. which was followed by Cambodia (15.32%) . **(Source: UN Comtrade)**

ii) Top 3 Sources of Babies' Garments to Germany in 2022 by percentage:



Bangladesh was the number one source of Babies' Garments and Clothing Accessories to Germany, imports 33.85% share from Bangladesh, 20.23% from China in 2022. In the same year **India** has exported 12.34% share of Germany's Total import of Babies' Garments and Clothing Accessories and stood at 3rd largest source country of Babies' Garments and Clothing Accessories. **(Source: UN Comtrade)**

iii) Top 3 Sources of Babies Garments to France in 2022 by percentage:



China was the largest source country of Babies' Garments and Clothing Accessories to France in 2022, France imports, 28.50 % share of its total import of Babies' Garments and Clothing Accessories from China in 2022. 19.30% from Bangladesh and 9.04% Babies' Garments and Clothing Accessories came from Spain. In that year **India** has exported 8.06 % share of the commodity of France's total import. **(Source : UN Comtrade)**

IMPORT

Sulphur

Sulphur, nonmetallic chemical element belonging to the oxygen group, one of the most reactive of the elements. Pure sulfur is a tasteless, odourless, brittle solid that is pale yellow in colour, a poor conductor of electricity, and insoluble in water. It reacts with all metals except gold and platinum, forming sulfides; it also forms compounds with several nonmetallic elements. Millions of tons of sulfur are produced each year, mostly for the manufacture of sulfuric acid, which is widely used in industry.

In cosmic abundance, sulfur ranks ninth among the elements, accounting for only one atom of every 20,000–30,000. Sulfur occurs in the uncombined state as well as in combination with other elements in rocks and minerals that are widely distributed, although it is classified among the minor constituents of Earth's crust, in which its proportion is estimated to be between 0.03 and 0.06 percent. On the basis of the finding that certain meteorites contain about 12 percent sulfur, it has been suggested that deeper layers of Earth contain a much larger proportion. Seawater contains about 0.09 percent sulfur in the form of sulfate. In underground deposits of very pure sulfur that are present in dome-like geologic structures, the sulfur is believed to have been formed by the action of bacteria upon the mineral anhydrite, in which sulfur is combined with oxygen and calcium. Deposits of sulfur in volcanic regions probably originated from gaseous hydrogen sulfide generated below the surface of Earth and transformed into sulfur by reaction with the oxygen in the air.

The history of sulfur is part of antiquity. The name itself probably found its way into Latin from the language of the Oscans, an ancient people who inhabited the region including Vesuvius, where sulfur deposits are widespread. Prehistoric humans used sulfur as a pigment for cave painting; one of the first recorded instances of the art of medication is in the use of sulfur as a tonic.

The combustion of sulfur had a role in Egyptian religious ceremonies as early as 4,000 years ago. The beginnings of practical and industrial uses of sulfur are credited to the Egyptians, who used sulfur dioxide for bleaching cotton as early as 1600 bce. The use of sulfur in explosives and fire displays dates to about 500 bce in China, and flame-producing agents used in warfare (Greek fire) were prepared with sulfur in the Middle Ages.

Sulfur is used in the vulcanisation of black rubber, as a fungicide and in black gunpowder. Most sulfur is, however, used in the production of sulfuric acid, which is perhaps the most important chemical manufactured by western civilisations. Sulfur is used in pharmaceutical skin preparations for the treatment of acne and other conditions. Sulfur is increasingly used as a component of fertilizers.

Sulphur is the 16th most abundant element in the earth's crust and is present in many compounds. Historically, mined sulphur was the largest source; however, in today's economy and environmental legislation, recovered sulphur from oil refineries and gas processing plants, constitutes the largest supply. As the precursor of sulphuric acid, a chemical process intermediary, sulphur is an important raw material for several industries, mainly the fertilizer and chemical industries. Over 50% of the sulphur produced each year is consumed in the manufacture of phosphate fertilizers; therefore, the status of the sulphur industry resembles closely that of the phosphate fertilizer industry—a strongly cyclical business. However, recent developments have created a new market opportunity in sulphur as a plant nutrient. During the past two decades, as the composition of fertilizers changed, crop production intensified and sulphur dioxide emissions decreased, sulphur deficiencies have become a serious problem. In more recent years, the fertilizer industry has increasingly pursued this market as farmers worldwide are demanding sulphur containing fertilizers to improve the profitability of their crop yields.

These are broadly classified under **H. S. Code 2503**

Table - 7

India's Top 10 Sources of Sulphur (HS Code : 2503)

Rank	Countries	2019		2020		2021		2022	
		Value (million \$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	Qatar	36.81	22.83	48.50	44.24	138.55	36.17	152.39	35.53
2.	U A E	87.78	54.46	22.17	20.22	91.71	23.94	100.84	23.51
3.	Oman	2.88	1.79	13.55	12.36	41.00	10.70	90.15	21.02
4.	Kuwait	1.63	1.01	8.76	8.00	32.97	8.61	35.56	8.29
5.	Japan	10.14	6.29	2.52	2.30	9.98	2.61	16.84	3.93
6.	Saudi Arab	8.51	5.28	6.22	5.68	49.88	13.02	15.19	3.54
7.	Iraq	0.00	0.00	0.00	0.00	0.92	0.24	11.84	2.76
8.	Korea RP	1.73	1.07	1.53	1.39	0.11	0.03	1.81	0.42
9.	Iran	0.03	0.02	0.00	0.00	0.00	0.00	1.56	0.36
10.	Singapore	5.14	3.19	1.85	1.69	8.67	2.26	1.29	0.30
	Others	6.54	4.06	4.53	4.13	9.29	2.43	1.40	0.33
	Total	161.18	100	109.62	100	383.09	100	428.88	100

Source: **DGCI&S**

Note : India's Import including re-import

Imports of Sulphur in India increased to US \$ 428.88 Million in 2022 from US \$ 383.09 Million in 2021. Over the period under review, India's Sulphur imports attained its maximum worth value of US \$ 428.88Million in 2022. In 2022 India imported the highest dollar worth of Sulphur from Qatar with valued at US \$ 152.39 Million or represented 35.53% of India's total import. In Second and Third source countries were UAE and Oman, from where India imported around US \$ 100.84 Million and US \$ 90.15 Million worth of Sulphur or accounted 23.51% and 21.02 share of respectively. In the same year. The top 10 countries shared 99.67% of the Sulphur import to India.

Table – 8

World Top 10 Importer of Sulphur (HS Code : 2503)

Rank	Countries	2019		2020		2021		2022	
		Value (million \$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	China	1311.87	31.13	604.49	22.24	1647.88	25.44	2308.75	30.94
2.	Morocco	719.44	17.07	514.94	18.95	1095.97	16.92	1847.77	24.76
3.	Brazil	234.74	5.57	208.60	7.67	466.70	7.21	667.35	8.94
4.	India	161.58	3.83	109.79	4.04	384.19	5.93	423.93	5.68
5.	USA	139.38	3.31	131.17	4.83	306.26	4.73	349.11	4.68
6.	Australia	71.06	1.69	88.11	3.24	197.31	3.05	220.28	2.95
7.	Israel	67.84	1.61	55.20	2.03	132.70	2.05	213.71	2.86
8.	Belgium	70.86	1.68	46.41	1.71	88.35	1.36	166.16	2.23
9.	South Africa	59.11	1.40	32.88	1.21	106.41	1.64	162.11	2.17
10.	Türkiye	35.12	0.83	19.53	0.72	53.65	0.83	112.54	1.51
	Others	1342.77	31.87	906.77	33.36	1997.27	30.84	989.57	13.26
	Total	4213.76	100	2717.89	100	6476.68	100	7461.28	100

Source :UN Comtrade

In 2022 Global import of Sulphur totaled were US \$ 7.46 Billion, which has increased by 15.20% from the year of 2021. Global Sulphur import peaked of US \$7461.28 Billion in 2022. In value terms, China constitutes the largest market for imported Sulphur worldwide with worth value of US \$ 2.31 Billion, making up 30.94% of global imports. The second position in the ranking was occupied by Morocco (US \$ 1.85 B), with the share of 24.76% of global imports. It was followed by the Brazil (US \$ 667.35 M) with the share of 8.94%. In the same year **India** constitutes the 4th largest importer of Sulphur in the world with worth value of US \$ 423.93Million, making up 5.68% share of world import

Essential Oils

An essential oil is a concentrated hydrophobic liquid containing volatile (easily evaporated at normal temperatures) chemical compounds from plants. Essential oils are also known as volatile oils, ethereal oils, aetheroleum, or simply as the oil of the plant from which they were extracted, such as oil of clove. An essential oil is essential in the sense that it contains the essence of the plant's fragrance—the characteristic fragrance of the plant from which it is derived. The term "essential" used here does not mean indispensable or usable by the human body, as with the terms essential amino acid or essential fatty acid, which are so called because they are nutritionally required by a living organism.

Essential oils are generally extracted by distillation, often by using steam. Other processes include expression, solvent extraction, sfumatura, absolute oil extraction, resin tapping, wax embedding, and cold pressing. They are used in perfumes, cosmetics, soaps, air fresheners and other products, for flavoring food and drink, and for adding scents to incense and household cleaning products.

Essential oils are often used for aromatherapy, a form of alternative medicine in which healing effects are ascribed to aromatic compounds. Aromatherapy may be useful to induce relaxation, but there is not sufficient evidence that essential oils can effectively treat any condition. Improper use of essential oils may cause harm including allergic reactions, inflammation and skin irritation. Children may be particularly susceptible to the toxic effects of improper use. Essential oils can be poisonous if ingested or absorbed through the skin.

Most common essential oils such as lavender, peppermint, tea tree oil, patchouli, and eucalyptus are distilled. Raw plant material, consisting of the flowers, leaves, wood, bark, roots, seeds, or peel, is put into an alembic (distillation apparatus) over water. As the water is heated, the steam passes through the plant material, vaporizing the volatile compounds. The vapors flow through a coil, where they condense back to liquid, which is then collected in the receiving vessel. Most flowers contain too little volatile oil to undergo expression, but their chemical components are too delicate and easily denatured by the high heat used in steam distillation. Instead, a solvent such as hexane or supercritical carbon dioxide is used to extract the oils. Extracts from hexane and other hydrophobic solvents are called concretes, which are a mixture of essential oil, waxes, resins, and other lipophilic (oil-soluble) plant material.

Aromatherapy is a form of alternative medicine in which healing effects are ascribed to the aromatic compounds in essential oils and other plant extracts. Aromatherapy may be useful to induce relaxation. Essential oils also have potential as a natural pesticide. certain oils have been shown to have a variety of deterring effects on pests, specifically insects and select arthropods. These effects may include repelling, inhibiting digestion, stunting growth, decreasing rate of reproduction, or death of pests that consume the oil.

These are broadly classified under **H. S. Code - 3301.**

Table - 9

India's Top 10 Source Countries of Essential Oils (HS Code : 3301)

Rank	Countries	2019		2020		2021		2022	
		Value (million \$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	China	90.54	13.05	84.14	37.00	101.27	35.47	98.25	28.70
2.	U K	4.14	0.60	3.76	1.65	15.42	5.40	66.85	19.53
3.	Indonesia	29.83	4.30	34.15	15.02	44.41	15.55	39.05	11.41
4.	U S A	23.38	3.37	17.41	7.65	19.15	6.71	23.39	6.83
5.	Madagascar	10.06	1.45	10.57	4.65	14.24	4.99	15.06	4.40
6.	Sri Lanka	9.37	1.35	9.34	4.11	12.04	4.22	14.04	4.10
7.	Brazil	13.08	1.89	10.36	4.55	9.36	3.28	11.88	3.47
8.	France	9.67	1.39	13.64	6.00	9.04	3.17	9.54	2.79
9.	Australia	2.20	0.32	2.94	1.29	6.97	2.44	9.19	2.69
10.	U A E	460.33	66.37	2.11	0.93	0.96	0.34	7.27	2.12
	Others	40.96	5.91	39.00	17.15	52.66	18.44	47.80	13.96
	Total	693.56	100	227.42	100	285.53	100	342.31	100

Source: **DGCI&S**

Note : India's Import including Re-import

There so many countries India imports Essential Oils, from. The dollar value of Essential Oils import in 2022 stood at US \$ 342.31 Million and US \$ 285.33 Million in 2021, which shows a growth of almost 19.88% from 2021. In 2022 India imported the highest dollar worth of Essential Oils from China with valued at US \$ 98.25 Million which represented 28.70% if India's total. In Second and Third place were UK and Indonesia, from where India imported around US \$ 66.85Million or 19.53% and US \$ 39.05 or accounted 11.41% Million worth of Essential Oils respectively. In 2019 India imported the highest dollar worth of Essential Oils from UAE with valued at US \$ 460.33 Million or 66.37% share of India's total import, which is the highest purchase of Essential Oils by India from any other countries during the review period.

Table - 10

World Top 10 Importer of Essential Oils (HS Code : 3301)

Rank	Countries	2019		2020		2021		2022	
		Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	USA	1095.69	19.08	1059.98	20.19	1178.81	20.76	1237.96	24.09
2.	France	443.07	7.72	410.96	7.83	465.01	8.19	472.23	9.19
3.	Germany	385.01	6.71	375.72	7.16	407.70	7.18	425.69	8.28
4.	India	693.33	12.08	228.23	4.35	285.42	5.03	354.34	6.89
5.	China	264.26	4.60	273.52	5.21	337.37	5.94	281.37	5.47
6.	U K	273.33	4.76	272.96	5.20	292.99	5.16	273.58	5.32
7.	Ireland	190.09	3.31	214.19	4.08	201.56	3.55	254.89	4.96
8.	Spain	135.64	2.36	149.78	2.85	177.24	3.12	183.64	3.57
9.	Netherlands	185.26	3.23	201.93	3.85	204.77	3.61	172.92	3.36
10.	Japan	206.61	3.60	175.96	3.35	143.88	2.53	158.79	3.09
	Others	1868.92	32.55	1885.75	35.93	1983.62	34.93	1323.72	25.76
	Total	5741.21	100	5248.97	100	5678.38	100	5139.14	100

Source :UNComtrade

Global Essential Oils imports amounted to US \$ 5.14 Billion in 2022, approximately equating the previous year level. In general, Essential Oils imports continue to indicate a relatively flat trend pattern. The most prominent rate of growth was recorded in 2019, when imports attained its maximum worth value of US \$ 5.74 Billion. In 2022USA (US \$ 1.24B) constitutes the largest market for imported Essential Oils worldwide, making up 24.09% of global imports. The second position in the ranking was occupied by France(US \$ 472.23M), with the share of 9.19% of global imports. It was followed by the Germany (US \$ 425.69), with the share of 8.28%. In that year **India** (US \$ 354.34M)constitutes the 4th largest market in the world for imported Essential Oils with 6.89% share of global import.